

IN THE CLAIMS:

1. (Original) An inventory application method, comprising the steps:

specifying whether a search is for orders or materials;

if the search is for orders,

- i) inputting materials available and capturing a complete set of attributes for the materials, and
- ii) looking for feasible matches of the materials against orders;

if the search is for materials,

- i) specifying orders and capturing attributes for routing steps of the orders, and
- ii) looking for feasible matches of orders against materials;

compiling a list of feasible matches;

evaluating each match;

ranking the matches; and

using said rankings to assign materials to orders.

2. (Original) A method according to Claim 1, further comprising the steps of inputting values for a set of parameters, and wherein:

the step of looking for feasible matches of the materials against orders includes the step of looking for feasible matches of the materials against orders on the basis of said input values; and

the step of looking for feasible matches of the orders against materials includes the step of looking for feasible matches of the orders against materials on the basis of said input values.

3. (Original) A method according to Claim 1, wherein the ranking step includes the steps of:

inputting weighted parameters defined by the user; and

ranking the matches according to the weighted parameters.

4. (Original) An inventory application system, comprising:

means for specifying whether a search is for orders or materials;

means for looking for feasible matches of materials against orders on the basis of input materials available and a set of attributes for the materials;

means for looking for feasible matches of orders against materials on the basis of specified orders and attributes for routing steps of the orders;

means for compiling a list of feasible matches;

means for evaluating each match;

means for ranking the matches; and

means for using said rankings to assign materials to orders.

5. (Original) A system according to Claim 4, wherein:

the means for looking for feasible matches of the materials against orders includes means for looking for feasible matches of the materials against orders on the basis of input values for a set of parameters; and

the means for looking for feasible matches of the orders against materials includes means for looking for feasible matches of the orders against materials on the basis of input values for a set of parameters.

6. (Original) A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for managing inventory, said method steps comprising:

specifying whether a search is for orders or materials;

if the search is for orders,

i) inputting materials available and capturing a complete set of attributes for the materials, and

ii) looking for feasible matches of the materials against orders;

if the search is for materials,

i) specifying orders and capturing attributes for routing steps of the orders, and

ii) looking for feasible matches of orders against materials;
compiling a list of feasible matches;
evaluating each match;
ranking the matches; and
using said rankings to assign materials to orders.

7. (Original) A program storage device according to Claim 6, wherein said method steps further comprise the step of inputting values for a set of parameters, and wherein:

the step of looking for feasible matches of the materials against orders includes the step of looking for feasible matches of the materials against orders on the basis of said input values; and

the step of looking for feasible matches of the orders against materials includes the step of looking for feasible matches of the orders against materials on the basis of said input values.

8. (Currently Amended) A method for allocating ~~materials~~ finished units to received customer orders for those units in a production facility, comprising the steps:

identifying ~~materials~~ finished units and orders for those units in production at a defined time;

~~identifying materials~~ of said identified finished units, identifying valid units that are available to be assigned to said orders; and

iteratively assigning and unassigning ~~materials~~ valid units to said orders until either (i) all the orders are fulfilled, or (ii) there are no more assignment options to be tested.

9. (Currently Amended) A method according to Claim 8, wherein:

the step of identifying ~~materials~~ finished units and orders includes the step of identifying incomplete orders and a due date for each of the incomplete orders;

the step of iteratively assigning and unassigning ~~materials~~ valid units includes the step of, starting with the incomplete order having the earliest due date, searching among the available ~~materials~~ valid units for a ~~material~~ unit that fulfills said incomplete order.

10. (Currently Amended) A method according to Claim 9, wherein the step of iteratively assigning and unassigning ~~materials~~ valid units includes the further step of, if no available ~~material~~ valid unit fulfills one of the incomplete orders ~~the order~~, searching among valid units previously assigned ~~material~~ to other orders for a ~~material~~ unit that fulfills one of the incomplete orders.

11. (Currently Amended) A system for allocating ~~materials~~ finished units to received customer orders for those units in a production facility, comprising:

means for identifying ~~materials~~ finished units and orders for those units in production at a defined time;

means for identifying ~~materials~~ which ones of said identified units are valid units that are available to be assigned to said orders; and

means for iteratively assigning and unassigning ~~materials~~ valid units to said orders until either (i) all the orders are fulfilled, or (ii) there are no more assignment options to be tested.

12. (Currently Amended) A system according to Claim 11, wherein:

the means for identifying ~~materials~~ finished units and orders includes means for identifying incomplete orders and a due date for each of the incomplete orders; and

the means for iteratively assigning and unassigning ~~materials~~ valid units includes

means for searching among the available ~~materials~~ valid units for a ~~material~~ unit that fulfills the one of the incomplete ~~order~~ orders having the earliest due date.

13. (Currently Amended) A system according to Claim 12, wherein the means for iteratively assigning and unassigning ~~materials~~ valid units includes means for searching among ~~materials~~ valid units previously assigned to orders, if no available ~~material~~ valid unit fulfills the incomplete order, for a ~~material~~ valid unit that fulfills the incomplete order.

14. (Currently Amended) A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for allocating ~~materials~~ finished units to received customer orders for those units in a production facility, said method steps comprising:

identifying ~~materials~~ finished units and orders for those units in production at a defined time;

~~identifying materials~~ of said identified finished units, identifying valid units that are available to be assigned to said orders; and

iteratively assigning and unassigning ~~materials~~ valid units to orders until either (i) all the orders are fulfilled, or (ii) there are no more assignment options to be tested.

15. (Currently Amended) A program storage device according to Claim 14, wherein:

the step of identifying ~~materials~~ finished units and orders includes the step of identifying incomplete orders and a due date for each of the incomplete orders;

the step of iteratively assigning and unassigning ~~materials~~ valid units includes the

step of, starting with the incomplete order having the earliest due date, searching among the available ~~materials~~ valid units for a ~~material~~ unit that fulfills said incomplete order.

16. (Currently Amended) A program storage device according to Claim 15, wherein the step of iteratively assigning and unassigning ~~materials~~ valid units includes the further step of, if no available ~~material~~ valid unit fulfills ~~the order~~ one of the incomplete orders, searching among valid units previously assigned ~~material~~ to other orders for a ~~material~~ unit that fulfills one of the incomplete ~~order~~ orders.

17. (New) A method according to Claim 8, wherein:

the finished units are metallic units, and

further comprising the step of identifying, for each of a group of the orders, the largest area of each of a set of the identified metallic units that can be assigned to the order.

18. (New) Apparatus according to Claim 11, wherein:

the finished units are metallic units; and

further comprising means for identifying, for each of a group of the orders, the largest area of each of a set of the identified metallic units that can be assigned to the order.

19. (New) A program storage device according to Claim 14, wherein:

the finished units are metallic units; and

the method steps further comprise the step of identifying, for each of a group of the orders, the largest area of each of a set of the identified metallic units that can be assigned to the order.